



# COVID-19

**SURFACES  
HELP TO ENHANCE  
HYGIENE AND  
INFECTION CONTROL IN  
HEALTHCARE  
ENVIRONMENTS**



Make Your Space™

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# COVID-19 pandemic: NEW CHALLENGES

Global impact

Rethink everything in every commercial or public space

Raised awareness about:

- spread of virus and bacteria
- role of touched surfaces;
- role of Hospital Acquired Infections.

It is accelerating the need for everyone to maintain decontaminated space to stop the spread of the virus by cleaning and disinfecting frequently touched surfaces such as sinks, countertops, tables, doorknobs, light switches, handles and wall cladding.

In high risk areas (such as bathrooms or patient rooms), virus and bacteria may end up sticking to more surfaces within a room. Increased possibilities that they pass from hand to eyes, nose and mouth.





# Improving infection control via appropriate surfaces and cleaning / disinfection protocols

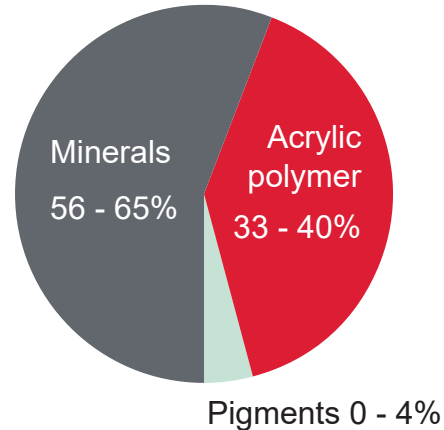


# What is Corian® solid surface?

## Composite material

- MMA (Methyl-Meth-Acrylate) and ATH (Alumina-Tri-Hydrate);
- Environmentally-friendly pigments for colour and aesthetic;
- Produced as flat sheet or as a cast bowl or sink;
- Acrylic resin (MMA): excellent UV and chemical resistance;
- ATH: extracted from Bauxite, then refined and purified.

2/3 mineral (filler) ATH  
1/3 Acrylic resin (binder) or MMA  
Environmentally friendly pigments



# A widely certified performance

In hospitals and healthcare facilities, surfaces must deliver:

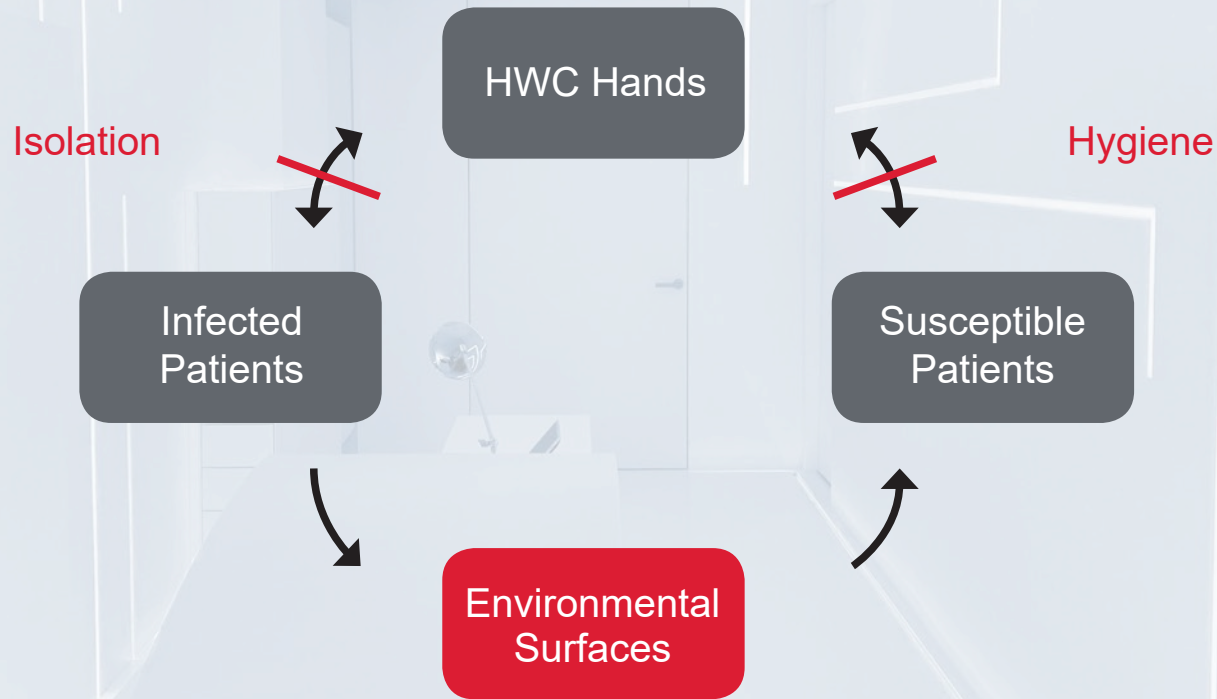
- functional benefits (hygiene, easy cleaning, durability, no release of VOCs);
- design benefits (specific configuration, seamless installations, etc...).

Corian® Solid Surface has achieved:

- world-class independent certifications for its properties, benefits and performance.



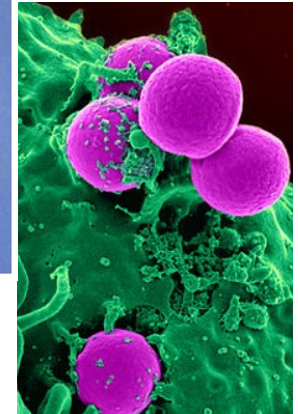
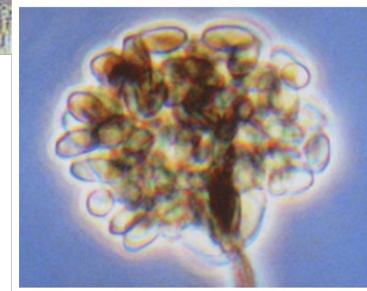
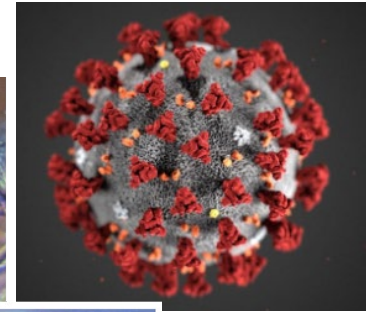
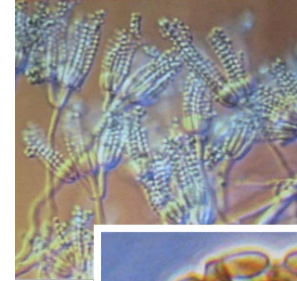
# Surfaces and the spread of infections



# Surfaces and the spread of infections

## Survival of pathogens on environmental surfaces<sup>1,2</sup>

PATHOGEN	LIFESPAN
SARS-CoV-2 <sup>3</sup>	4 hours to 3 days
C. Difficile	> 5 months
Staphylococci	7 months
VRE	4 months or over 3 days
Acinetobacter	5 months
Norovirus	3 weeks
Adenovirus	3 months
Rotavirus	3 months
SARS, HIV, etc.	Days to weeks



1. Survival rates are dependent upon the type of surface, environmental conditions, presence of biofilm among other factors.
2. Feid, Craig, "Novel Antimicrobial Surface Coatings and the Potential for Reduced Fomite Transmission of SARS and Other Pathogens"
3. Van Doremalen, N. et al., April 16, N Engl J Med 2020; 382:1564-1567, DOI: 10.1056/NEJMc2004973



# SARS-CoV-2 and surfaces: disinfection protocols

From ECDC (European Center for Disease Prevention and Control)  
0,1% Sodium Hypochloride to eliminate SARS-CoV-2 from surfaces.



Surfaces commonly contaminated by MRSA (Methicillin-resistant *staphylococcus aureus*) R.S. Ulrich with P.A. Wilson



# SARS-CoV-2 and surfaces: disinfection protocols

**Table 1.** Antimicrobial agents effective against different coronaviruses: human coronavirus 229E (HCoV-229E), mouse hepatitis virus (MHV-2 and MHV-N), canine coronavirus (CCV), transmissible gastroenteritis virus (TGEV), and severe acute respiratory syndrome coronavirus (SARS-CoV)<sup>1</sup>

Antimicrobial agent	Concentration	Coronaviruses tested	References
Ethanol	70%	HCoV-229E, MHV-2, MHV-N, CCV, TGEV	[4,6,7]
Sodium hypochlorite	0.1–0.5%	HCoV-229E	[6]
	0.05–0.1%	SARS-CoV	[5]
Povidone-iodine	10% (1% iodine)	HCoV-229E	[6]
Glutaraldehyde	2%	HCoV-229E	[6]
Isopropanol	50%	MHV-2, MHV-N, CCV	[7]
Benzalkonium chloride	0.05%	MHV-2, MHV-N, CCV	[7]
Sodium chlorite	0.23%	MHV-2, MHV-N, CCV	[7]
Formaldehyde	0.7%	MHV-2, MHV-N, CCV	[7]

**CLEANING APPROACHES:** The use of 0,1% sodium hypochlorite (dilution 1:50 if household bleach at an initial concentration of 5% is used after cleaning with a neutral detergent is suggested for decontamination purposes, although no data on the effectiveness against the SARS-CoV-2 are available. For surfaces that could be damaged by sodium hypochlorite, 70% concentration of ethanol is needed for decontamination after cleaning with a neutral detergent.

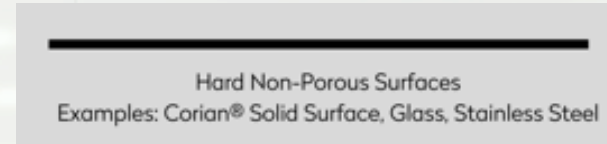
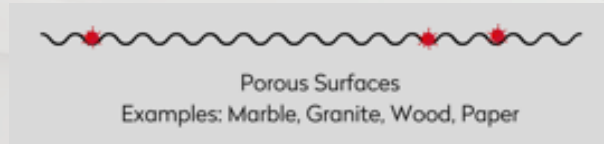
# SARS-CoV-2 and surfaces: disinfection protocols

## Cleaning and disinfection recommendations for Corian® solid surface

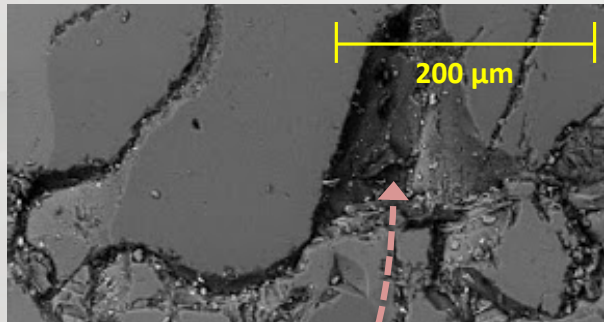
Video made by the European Technical Centre of the Corian® Design division of DuPont In March 2020

# Why Corian® helps to prevent the spread of infection?

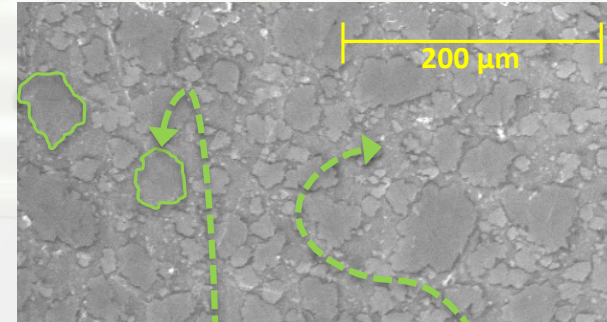
- Homogenous and non-porous
- No microcavities which can trap pathogens



Granite



Void



Mineral filler  
(ATH)

Polymeric resin  
(acrylic)

Corian®  
Solid Surface

# Why Corian® helps to prevent the spread of infection?

- Homogenous and non-porous
- No microcavities which can trap pathogens

The Importance of Non-Porous  
Surfaces in Disinfection Effectiveness



Before:




Hard Non-Porous Surfaces:  
Examples: Corian® Solid Surface, Stainless Steel, Glass



Porous Surfaces:

After:



Non Porous Surfaces:  
Examples: Corian® Solid Surface, Stainless Steel, Glass



Porous Surfaces:

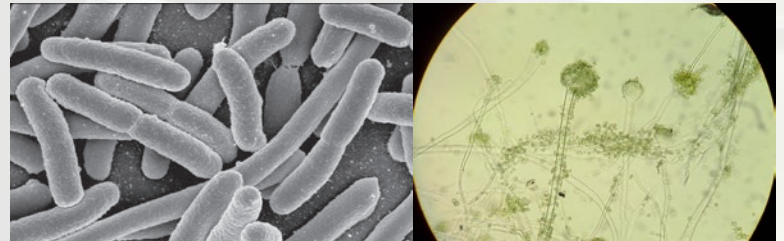


# Virus and bacteria: ZERO opportunities with Corian® solid surface.

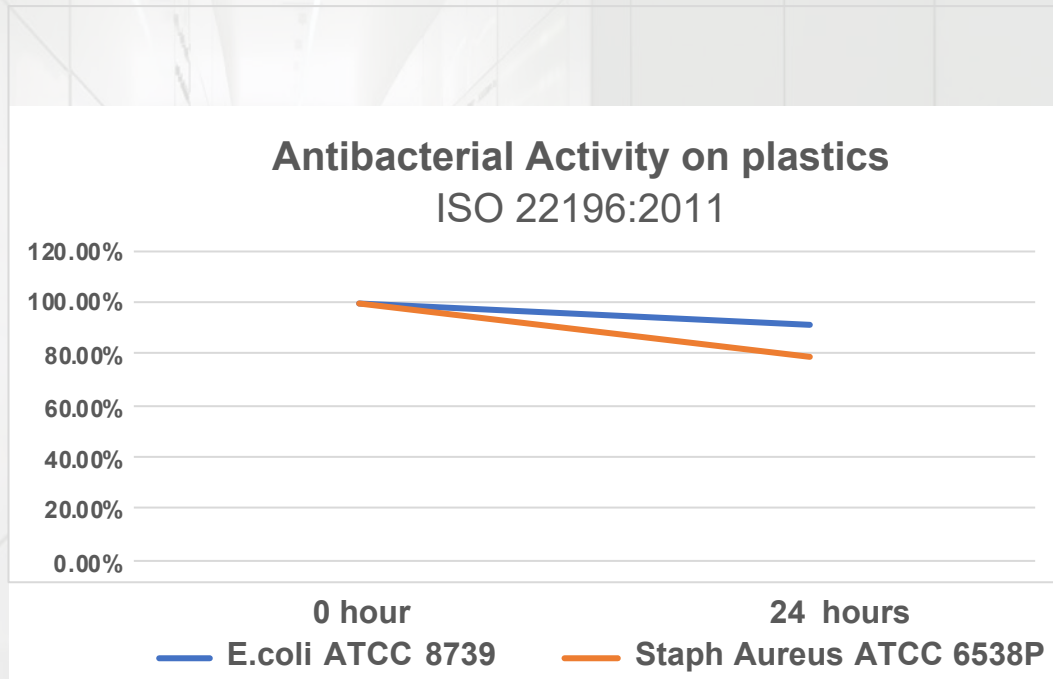
Compliant to EN ISO 846 and ASTM D 6329.

Even after 29 days of incubation, no bacterial growth is observed. Test fungi (e.g. aspergillums niger, penicillium funiculosum) even with a carbon source: zero growth.

Corian® solid surface material classified as fungi static.



# Virus and bacteria: ZERO opportunities with Corian® solid surface



# Corian®: Designed for hygiene

Germs are commonly found in:

- cracks and pores;
- delaminated countertops, sink rims and backsplashes;
- horizontal or vertical surface seams.

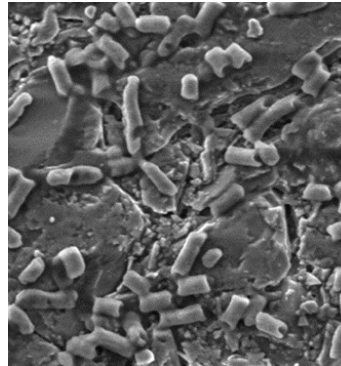
Germs may be left on surfaces due to human error or poor cleaning practices on joints.



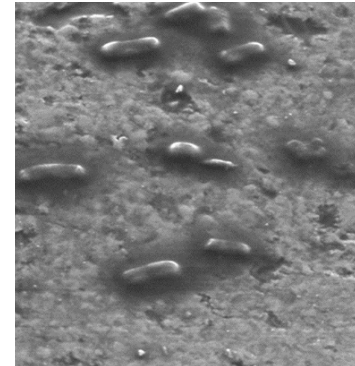
Laminate



Laminate



E. coli on unsealed granite



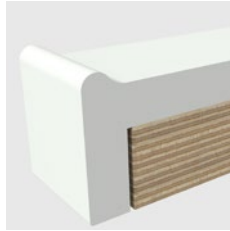
E. coli on Corian®

# Corian®: Designed for hygiene

Exploiting the design flexibility of Corian® solid surface to deliver superior hygiene.

Key benefits:

- remove germs traps,
- speed up disinfection process,
- reduce the risk of poor cleaning practices.



3 design features

- seamless integrated sink,
- anti-drip edges,
- coved backsplash.



# Cleaning and disinfection of Corian®

Excellent chemical resistance thanks to the acrylic component.

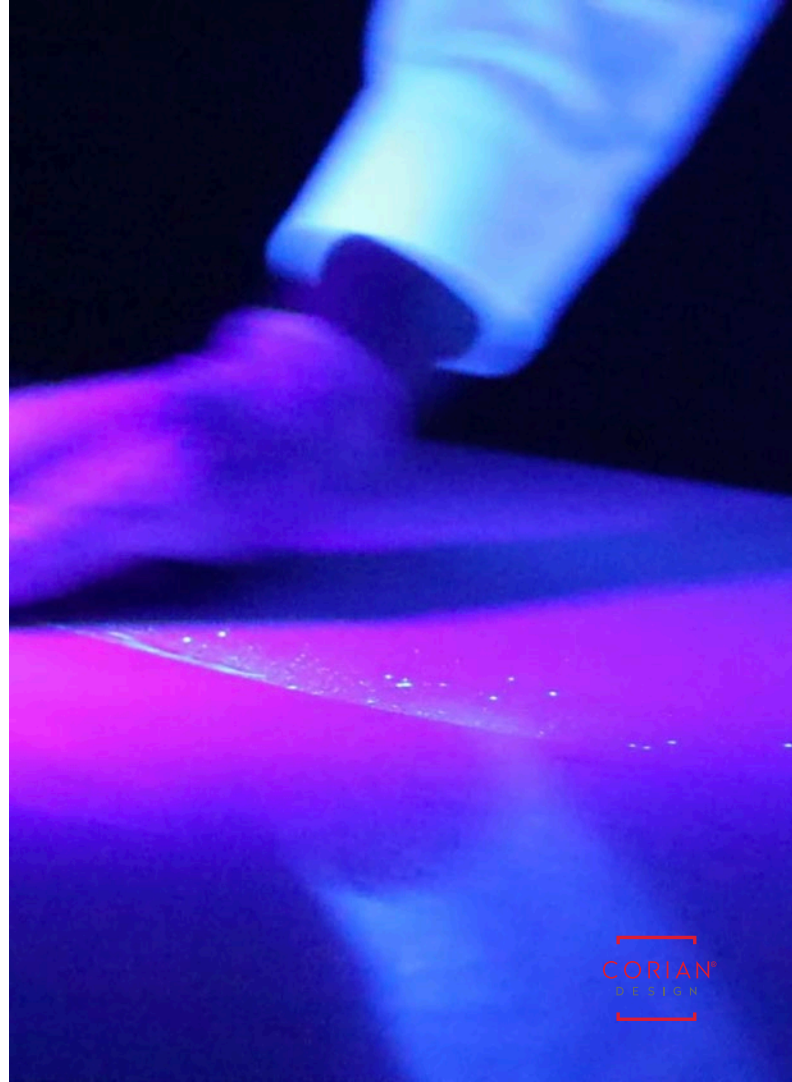
Professional cleaners and harsh chemical disinfectants including ethanol and isopropanol (with exposure below 16) leave no marks.

- HYDROGEN PEROXIDE
- HYPOCHLORITE (BLEACH)
- PHENOL
- ALCOHOL (ETHYLISOPROPYL)
- PERACETIC ACID

CORIAN® SOLID SURFACE  
TECHNICAL BULLETIN  
EMEA/ENGLISH



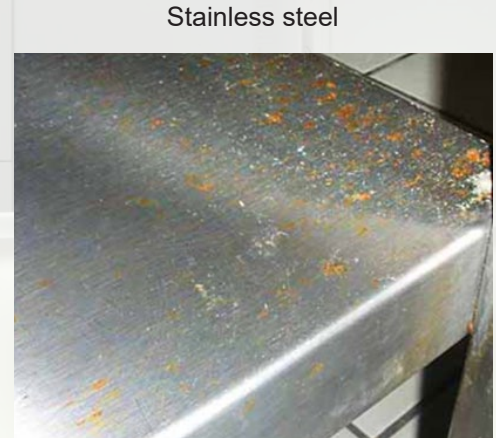
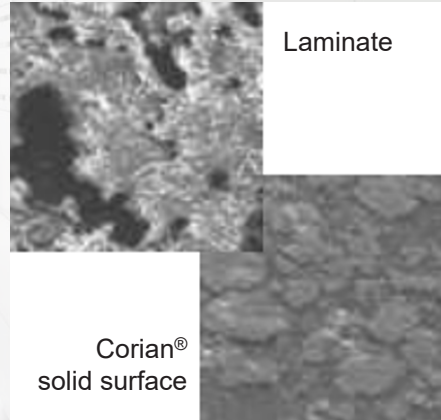
**Corian® solid surface**  
**Effects of healthcare**  
**chemical disinfectants**



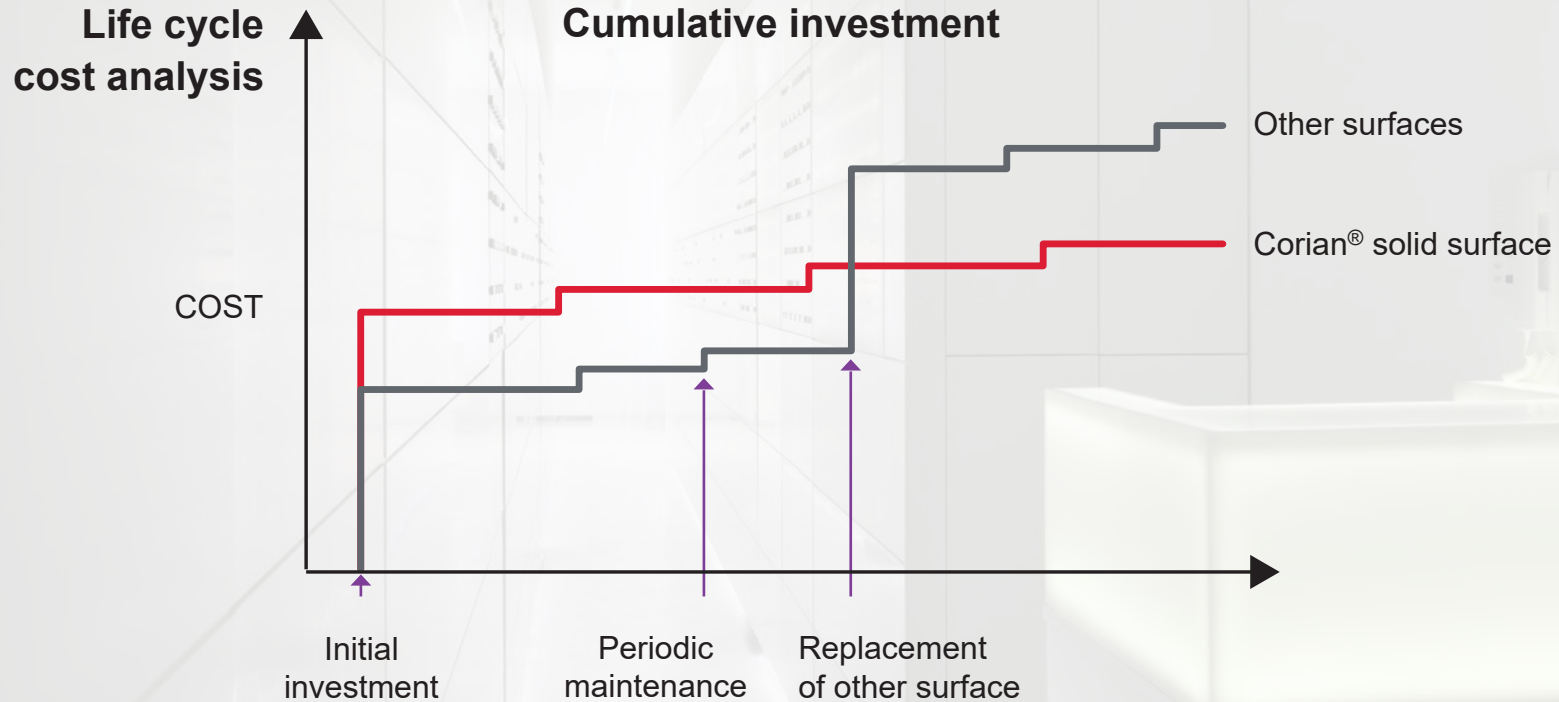


# Routine maintenance of Corian®

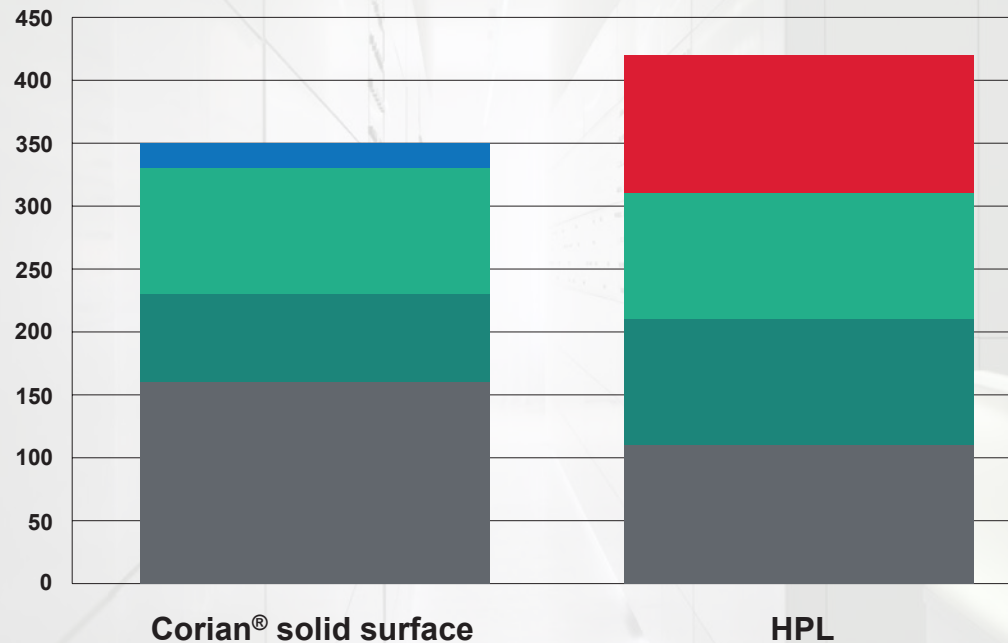
- Most dirt & stains: get detergents in combination with a mild abrasive cleaning pad.
- Cleaning with a light abrasive can potentially remove laminate finishes and thus create surfaces roughness where germs can become trapped.
- For stainless steel: chlorides could build up under dirt or stains and transform into metallic salts, thus originating corrosion.



# Corian®: A better return on investment

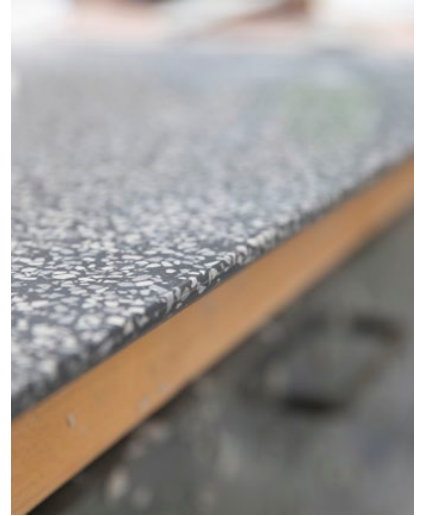


# Corian®: A better return on investment



# Corian®: Perfectly repairable

- Basic hand tools used by maintenance professionals;
- Repair of breakage with colour matching Corian® off-cut with hand router and sander.

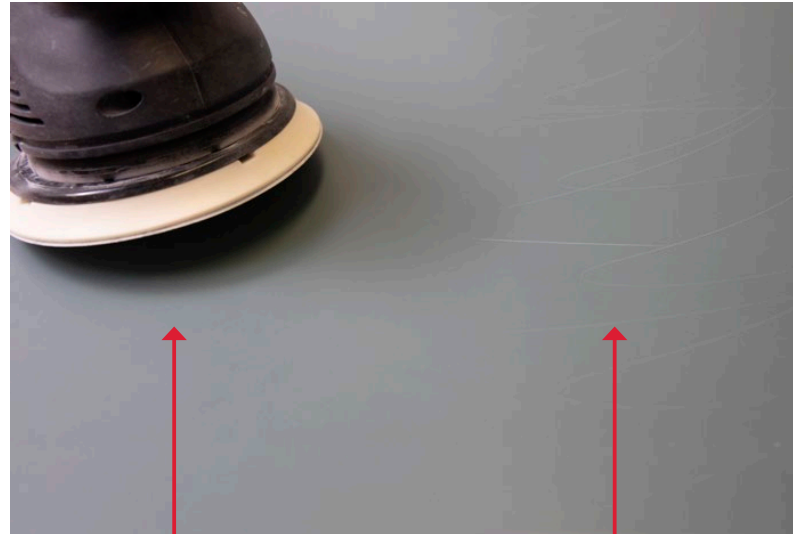


# Corian®: Perfectly repairable

- Sanding Corian® solid surface with random orbic sander to remove scratches.



Removal of scratches



Scratches removed

Scratches to be removed



# Healthcare environments: Comparison of most used surfaces

	Corian®	Stainless steel	HPL (plastic laminate)	Casted plastics	Quartz
Non-porous	+	+	+	+	+
Seamless construction	+				
Repairable	+				
Will not peel, chip or dent	+			+	
Bleach cleanable	+	+			+
Fire rating for public (Euroclass B)	+	+			+
Suitable for wet environments	+	+		+	+
Design flexibility	+			+	
+90 colour options	+		+		+
Price	€€€	€€€€	€€	€€	€€€

Features highlighted in red are critical for keeping surfaces clean in the most stringent virus free environments.

# Designed with Corian® solid surface

## Flexible, ready-to-use solutions from experienced partners



C-line benches by Crea Diffusion



Healthcare sinks by NOAS

# Corian® solid surface in hospital and healthcare facilities

## Patient rooms



# Corian® solid surface in hospital and healthcare facilities

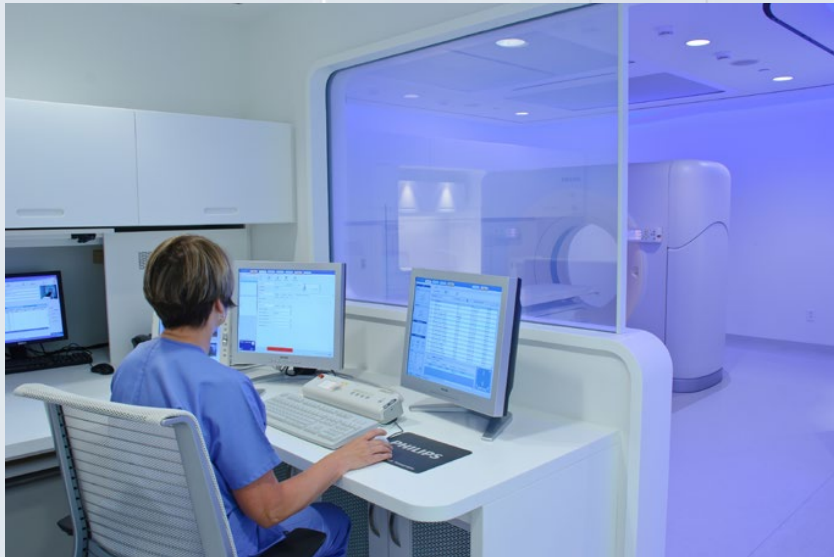
## Operating theatres





# Corian® solid surface in hospital and healthcare facilities

## Testings area and lab





# Corian® solid surface in hospital and healthcare facilities

## Reception lobbies



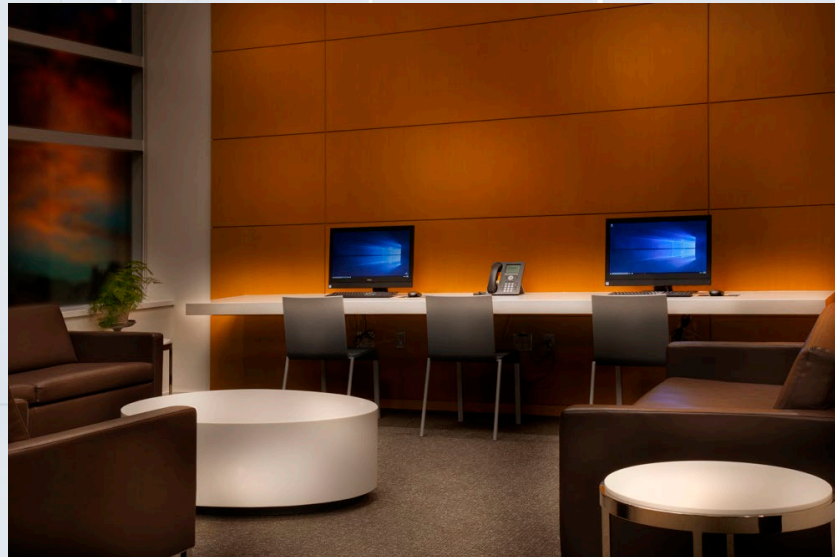
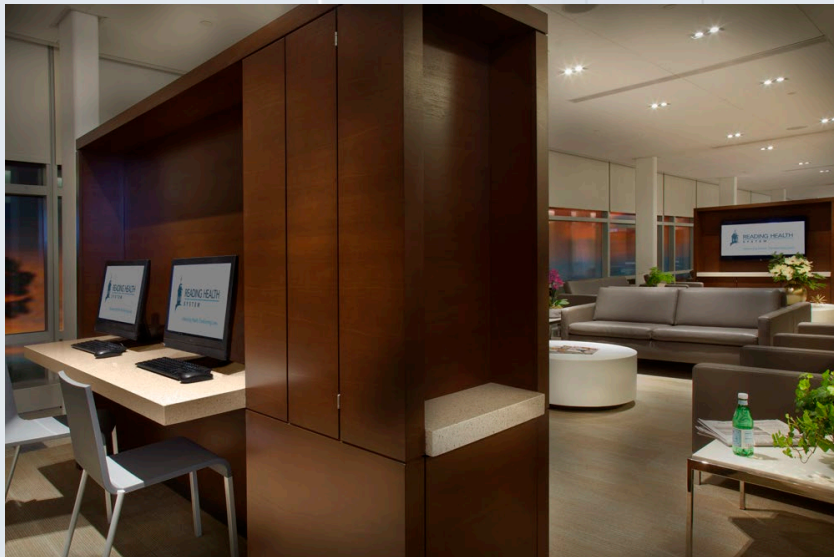
# Corian® solid surface in hospital and healthcare facilities

## Nurse stations



# Corian® solid surface in hospital and healthcare facilities

## Waiting rooms





# Corian® solid surface in hospital and healthcare facilities

## Cafeteria food service



# Corian® solid surface in hospital and healthcare facilities

## Neonatal pediatrics





# Corian® solid surface in hospital and healthcare facilities

## Handwashing stations

